

**AMENDMENTS TO THE SPECIFICATION:**

Page 1, before line 1, please insert the following heading:

**BACKGROUND**

Page 2, before line 11, please insert the following heading:

**SUMMARY OF THE INVENTION**

Replace the paragraph beginning on page 3, beginning at line 4, with the following amended paragraph:

**BRIEF DESCRIPTION OF THE DRAWINGS**

[[The]] A preferred embodiment of the invention is illustrated in the attached figures, in which:

- Fig. 1 shows a wheel of the vehicle, in which the electric traction chain of the invention is integrated, viewed in section along line C/C indicated in Fig. 2;
- Fig. 2 is a view in the direction A in Fig. 1;
- Figs. 3A, 3B and 3C are partial perspective views showing the electromechanical transmission chain;
- Figs. 4A, 4B and 4C are sections along 4/4 in Fig. 2, showing the essential elements of the gear ratio change mechanism with two ratios;
- Fig. 5 is a partial view of the electromechanical transmission chain;
- Fig. 6 is a chronogram showing the changes over time during the gear changes, of the position of the control fork, the speed of the traction motor and the torque of the traction motor.

Page 3, before line 16, please insert the following heading:

#### DETAILED DESCRIPTON OF PREFERRED EMBODIMENT

Replace the paragraph on page 3, beginning at line 16, with the following amended paragraph:

Figs. 1 and 2 show a wheel W on which is fitted a tire T. The wheel is mounted to rotate on a wheel support K, the axis XX being its rotation axis. There is also a housing 1 closed by a cover 2 and by the stator portion [[S]] 5 of an electric traction motor M. The housing 1 comprises an upper extension 10 and a lower extension 11 to whose ends can be attached a suspension system for the wheel W relative to a chassis or the body of the vehicle. Here, only the so-termed unsuspended elements of a ground contact system for an automobile vehicle are shown.

Replace the paragraph on page 4, beginning at line 17, with the following amended paragraph:

The gear change shifter mechanism comprises a dog clutch 46 which enables a gear ratio to be selected. In the illustrated embodiment, the dog clutch 46 comprises inner teeth which match the (outer) teeth of the controllable gear wheel 530 and of the controllable idle gear wheel 42. The dog clutch 46 can engage either with the controllable idle gear-wheel 42 to give a reduction ratio (Figs. 3A and 4A), or with the controllable gear-wheel 530 to give direct meshing (Figs. 3C and 4C), or else the dog clutch 46 can be moved to a disengaged position in which its inner teeth are opposite the disengagement zone 532 free from any teeth (Figs. 3B and 4B).

Replace the paragraph bridging pages 4-5 with the following amended paragraph:

Besides, the dog clutch 46 comprises an external peripheral neck 460 and recesses 461 (see Fig. 5). The end of [[a]] an input shaft A of the rotor of the electric motor M can be seen (Figs. 4), YY being the rotation axis of the shaft A. A clutch basket 38 is mounted attached to the shaft A of the electric motor M. The dog clutch 46 is centered by the clutch basket 38. A fork 16 is engaged radially on the outside in the peripheral neck 460 formed on the dog clutch 46. The clutch basket 38 comprises fingers 380 engaged in the recesses 461 of the dog clutch 46. The dog clutch 46 can slide axially relative to the clutch basket, while being rotationally fixed with respect to it.

Replace the paragraph on page 5, beginning at line 5, with the following amended paragraph:

The fork 16 is controlled by a motorized reduction unit 12. A position detector 21 is connected to the fork 16. The dog clutch 46 can have three positions:

- a position in which the dog clutch 46 moves the toothed wheel via an intermediate gearwheel 6 which enables the rotation speed to be inverted; the dog clutch 46 is then coupled with the idle gear-wheel 42 and ~~is therefore engaged with~~ therefore indirectly connects the input shaft A with the auxiliary gear-wheel 310 and the first gear-wheel 31 via the intermediate gear-wheel 6 and ~~the auxiliary gear-wheel 310~~

(see in particular Figs. 3A and 4A); this is the aforesaid other mechanical transmission path;

- a position in which it is coupled directly connects the input shaft with the auxiliary gear-wheel 530 and is therefore engaged thus directly with the second gear-wheel 53 (see in particular Figs. 3C and 4C);
- a neutral intermediate position, shown in Figs. 3B and 4B.

Replace the paragraph on page 8, beginning at line 1, with the following amended paragraph:

The vehicle can have two or four drive wheels. Overall control of the vehicle is effected by a central computing unit called the "CU". The computing unit uses any appropriate algorithm ~~within the grasp of the skill man and unfamiliar with the object of this invention,~~ to determine a suitable moment for carrying out the gear change.

The computing unit has some informations information at its disposal:

- sensors: accelerator pedal position, brake pedal position or pressure, steering-wheel position, gas valve position and combustion engine speed (if the vehicle is equipped with a combustion engine);
- informations information from the traction electronics: motor speeds, gear ratios currently engaged; these informations are updated regularly (for example, every 10 ins) via a CAN (~) bus or similar bus. From these informations, the computing unit can then calculate the speed of each wheel.